

CV SALTS Technical Advisory Committee
21 January 2010
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California Regional Water Quality Control Board, Central Valley Region

Irrigated Lands Regulatory Program

There are over 7 million acres of irrigated lands in the Central Valley. The irrigated lands regulatory program (ILRP) regulates discharge of irrigation return flows and storm water from those lands to surface waters. A conditional waiver of waste discharge requirements is the mechanism used to regulate these discharges (conditions are enforceable).

Over 5 million acres (about 25,000 growers) have regulatory coverage in the ILRP by participating in water quality Coalitions that are locally managed by agricultural interests. The Coalitions conduct an extensive amount of monitoring and work with growers to address identified water quality problems.

The definition of irrigated lands includes crop land, managed wetlands, and nurseries. Irrigated lands regulated under waste discharge requirements are not covered by the ILRP.

Monitoring

Monitoring has been conducted since 2004 in the ILRP with over 200,000 monitoring results for a variety of parameters, including salts, nutrients, pesticides, metals, sediment, and pathogens. We have had 240 monitoring sites (not all of them are currently active). Electrical conductivity is measured each time a sample is collected. A great deal of TDS, hardness, and nutrient data (including nitrates) is available.

Data from earlier UC Davis monitoring studies can be found at:

http://www.waterboards.ca.gov/centralvalley/water_issues/irrigated_lands/monitoring/monitoring_data/uc_davis_monitoring/index.shtml .

Data from the Coalitions can be found at:

http://www.waterboards.ca.gov/centralvalley/water_issues/irrigated_lands/monitoring/monitoring_data/program_participants/index.shtml

Management Plans

Per the Coalition group waiver, if more than two exceedances of a water quality objective occur in a three year period, a management plan must be prepared. For EC and salts, the Coalitions are identifying their participation in CV-SALTS as the primary mechanism for addressing the exceedances.

EC Management Plans

45 EC site-pollutant combinations to date, within 9 surface water sub-basins. Four sub-basins are in the Lower Sacramento River basin, and five are in the San Joaquin River basin. Ten of the 45 site-pollutant combos (ie management

plans) are in the Sacramento River basin (22%) and 35 are in the SJ basin (78%).

TDS Management Plans

41 TDS site-pollutant combinations to date, within 8 surface water sub-basins. Two sub-basins are in the Lower Sacramento River basin, five are in the San Joaquin River basin, and one is in the Tulare Lake basin. Six of the 41 site-pollutant combos (ie management plans) are in the Sacramento River basin (15%) 34 are in the SJ basin (83%), and one is in the Tulare Lake basin.

Nitrate Management Plans

5 management plan sites, all within one surface water sub-basin (Middle San Joaquin-Lower Merced-Lower Stanislaus sub-basin) in Stanislaus and northern Merced Counties, just east of the San Joaquin River.

Long Term Program/ EIR

- The Central Valley Water Board considers the current ILRP an interim program and required staff to develop a long-term program that would consider discharges to ground water.
- A stakeholder advisory work group was established in December 2008. The work group came to agreement on the range of alternatives that would be considered in the EIR at their August 2009 meeting (see below for a summary of the alternatives). More information can be found at:
http://www.waterboards.ca.gov/centralvalley/water_issues/irrigated_lands/index.shtml.
- We are currently dialoguing with small work groups of the advisory work group to develop the staff preferred alternative and to discuss how the economic analysis will be conducted.
- The draft EIR will be released in summer 2010 with Board consideration of the final EIR in spring 2011.

Long-term Irrigated Lands Regulatory Program Alternatives to be Evaluated in Programmatic EIR

No.	Alternative Description and Summary	Lead Entity	Lead Entity Rspnsblties	CVWB Rspnsblties	Growers' Regulatory Requirements	SW Monitoring	GW Monitoring	Tracking
1	No Change - CEQA "No Project" alternative. Renewal and continuation of the current program. Coalition groups function as lead entities. Where monitoring indicates a problem, third-party groups and growers implement management practices in response.	Coalition groups	1. Enroll member growers. 2. Develop monitoring plans. 3. Conduct monitoring. 4. Develop and implement surface water quality management plans where monitoring data shows two or more exceedances of an applicable water quality objective. 5. Inform/coordinate with growers.	1. Require 100% participation. 2. Review and approve monitoring plans. 3. Review monitoring reports. 4. Review and approve surface water quality management plans. 5. Review ILRP performance. 6. Respond to complaints. 7. Enforce ILRP.	1. Submit application and pay fees. 2. Implement water quality management practices. 3. Prevent nuisance conditions and/or exceedance of WQOs. 4. Provide requestion information to Coalition group.	Watershed-based (same as current ILRP)	None	

No.	Alternative Description and Summary	Lead Entity	Lead Entity Rspnsblties	CVWB Rspnsblties	Growers' Regulatory Requirements	SW Monitoring	GW Monitoring	Tracking
2	Third-Party Lead Entity - Third-party groups would function as lead entities representing growers. Regulation of discharges to surface water would be similar to Alternative 1. This alternative allows for a reduction in surface water monitoring under lower threat circumstances and where management plans are developed. This alternative also requires the development of groundwater quality management plans to minimize discharge of waste to groundwater.	Third-party groups	1. Enroll member growers and provide summary information to the CVWB. 2. Provide members and CVWB an organizational or management structure. 3. Make ILRP expenditure summaries available to members. 4. Notify affected group members of CVWB enforcement against the third-party. 5. Develop monitoring/management practice tracking plans. 6. Conduct monitoring. 7. Develop and implement surface water quality management plans where monitoring data shows two or more exceedances of an applicable water quality objective. 8. Develop	1. Require 100% participation. 2. Review and approve monitoring plans. 3. Review and approve surface water quality management plans. 4. Review and approve groundwater quality management plans. 5. Review and approve <i>optional</i> watershed/area management objectives plans. 6. Review monitoring reports. 7. Review ILRP performance. 8. Respond to complaints. 9. Require additional monitoring and practices where WQOs are not being met. 10. Enforce ILRP.	1. Submit application and pay fees. 2. Implement water quality management practices in accordance with any approved plans. 3. Prevent nuisance conditions and/or exceedance of WQOs. 4. Provide ILRP information to third-party group.	Watershed-based (same as current ILRP) with option for reduced monitoring where <i>optional</i> watershed/area management plan is developed.	Regional monitoring for at a minimum nitrates and salts (under a local groundwater management plan). or Tracking implementation of required management practices along with a limited number of site specific studies (under third-party developed groundwater quality management plans).	Tracking Management practice tracking.

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3	Individual Farm Water Quality Management Plans - Individual growers would work with the CVWB, or designated implementing agency, to develop an individual farm water quality management plan. The CVWB would approve the plan.	CVWB	See CVWB responsibilities.	1. Enroll growers. 2. Require 100% participation. 3. Review applications, prioritize review of farm water quality management plans. 4. Negotiation MOUs with technical service providers. 5. Conduct grower site inspections. 6. Coordinate with growers to ensure plans/practices are addressing water quality problems. 7. Review monitoring reports. 8. Review ILRP performance. 9. Respond to complaints. 10. Certify participating growers are implementing practices that protect water quality. 11. Require additional monitoring and practices where WQOs are not being met. 12. Enforce ILRP.	1. Submit application and pay fees. 2. Within 2-years, develop and implement a farm water quality management plan. 3. Submit plan for CVWB approval. 4. Maintain and update plan as needed. 5. Prevent nuisance conditions and/or exceedance of WQOs. 6. Allow inspection by CVWB or representative.	Monitoring of management practices (e.g., visual monitoring, inspection of proper operation).	Monitoring of management practices (e.g., visual monitoring, inspection of proper operation).	Management practice tracking.

No.	Alternative Description and Summary	Lead Entity	Lead Entity Rspnsblties	CVWB Rspnsblties	Growers' Regulatory Requirements	SW Monitoring	GW Monitoring	Tracking
4	Direct Oversight with Regional Monitoring - Individual growers or "legal entities" assuming responsibility for waste discharge would work directly with the CVWB. This alternative provides the option for third-party group conducted monitoring and reporting. Under this approach, regulatory requirements would be scaled using tiered, threat-based criteria. Higher threat operations would be required to implement additional management practices and more extensive monitoring than lower threat operations. Under this alternative all growers would be required to develop an individual farm water quality management plan.	CVWB or "legal entity"	Third-party monitoring group:	1. Enroll growers or "legal entities." 2. Require 100% participation. 3. Review and approve monitoring plans. 4. Review monitoring reports. 5. Coordinate with growers to ensure plans/practices are addressing water quality problems; assign growers to appropriate tier or tiers. 6. Review ILRP performance. 7. Respond to complaints. 8. Conduct grower site inspections. 9. Require additional monitoring and practices where WQOs are not being met. 10. Enforce ILRP.	1. Submit application and pay fees. 2. Within 2-years, develop and implement a farm water quality management plan - the plan would be kept onsite and submitted to the CVWB upon request. 3. Maintain and update plan as needed. 5. Allow inspection by CVWB or representative. 6. Prevent nuisance conditions and/or exceedance of WQOs. 7. Maintain facility records of each field's nutrient budget. 8. Complete 15 hrs of farm water quality education within 2-years. 9. Submit annual certified statement to CVWB regarding appropriate tier application. Tier 1 Only: submit site-specific evaluation to CVWB demonstrating minimal potential impact of waste discharge to SW and GW. Tier 3 Only: develop a nutrient	Tiers 2 and 3 would conduct individual monitoring, or participate in regional monitoring, with Tier 2 operations having reduced monitoring requirements.	Tier 3 operations would conduct individual monitoring <i>and</i> participate in regional monitoring; Tier 2 operations would choose individual or regional monitoring.	Nutrient/pesticide applications, management practices.

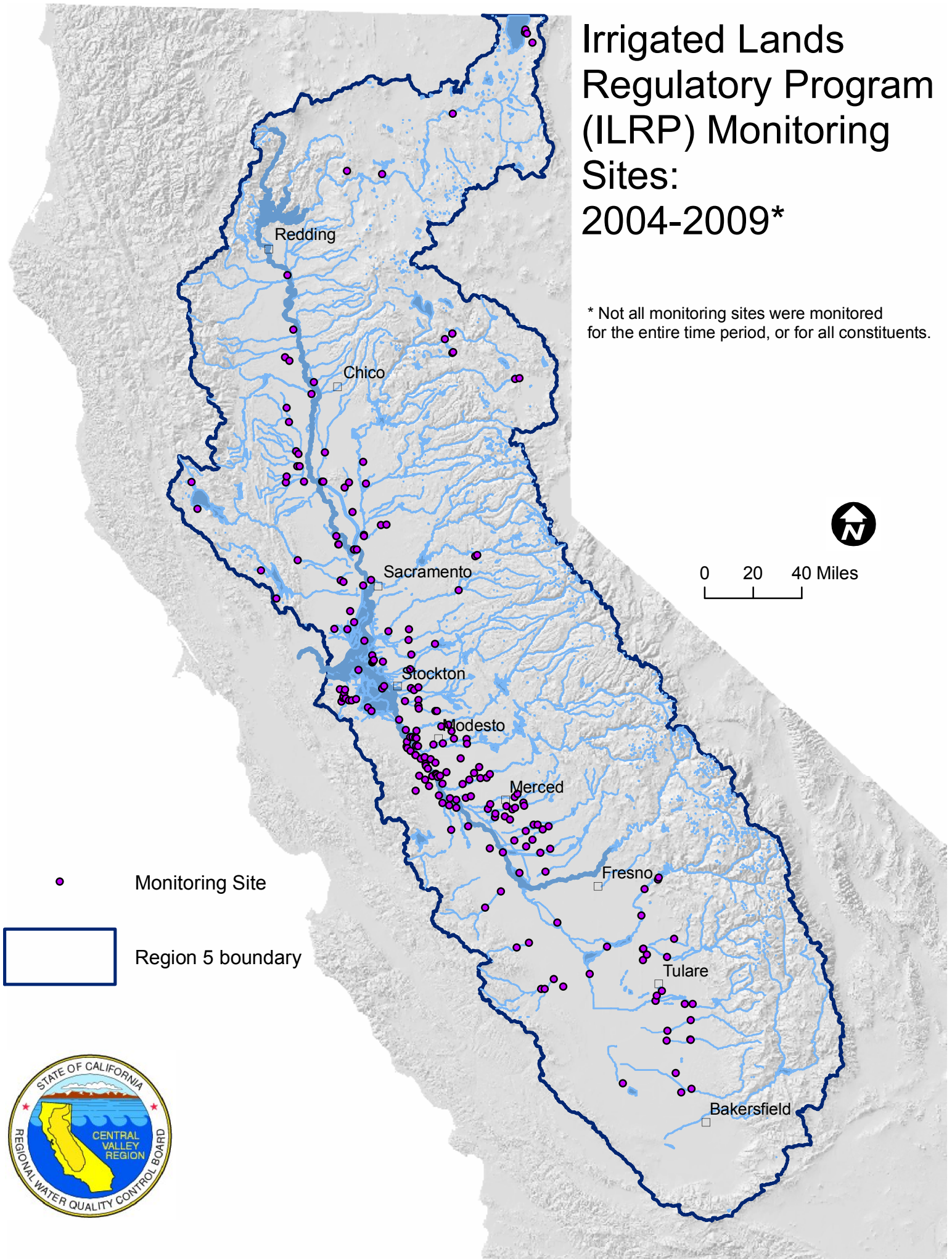
No.	Alternative Description and Summary	Lead Entity	Lead Entity Rspnsblties	CVWB Rspnsblties	Growers' Regulatory Requirements	SW Monitoring	GW Monitoring	Tracking
5	Direct Oversight with Farm Monitoring - Individual growers would work directly with the CVWB. Growers would be required to develop and impleme t a farm water quality management plan and nutrient management plan.	CVWB	See CVWB responsibilities.	1. Enroll growers. 2. Require 100% participation. 3. Review monitoring reports. 4. Develop prioritization scheme for installation of monitoring wells. 5. Coordinate with growers to ensure plans/practices are addressing water quality problems. 6. Review ILRP performance. 7. Respond to complaints. 8. Conduct grower site inspections. 9. Require additional monitoring and practices where WQOs are not being met. 10. Enforce ILRP.	1. Submit application and pay fees . 2. Within 2-years, develop and implement a farm water quality management plan - the plan would be kept onsite and submitted to the CVWB. 3. Maintain and update the plan as needed. 4. Develop and implement a nutrient management plan if commercial fertilizer or manure are used. 5. Allow inspection by CVWB or representative. 6. Prevent nuisance conditions and/or exceedance of WQOs. 7. Maintain facility records of each field's nutrient budget.	Individual farm monitoring for constituents of concer in tailwater and stormwater.	Individual supply well monitoring. Installation and sampling of monitoring wells where CVWB requires, based on vulnerability factors.	Nutrient/pesticide applications, management practices.

The matrix is from the following document:

http://www.waterboards.ca.gov/centralvalley/water_issues/irrigated_lands/long_term_program_development/20aug09_advisory_wkgrp_mtg/20aug09_2nd_draft lngterm ilrp alts.pdf .

Irrigated Lands Regulatory Program (ILRP) Monitoring Sites: 2004-2009*

* Not all monitoring sites were monitored for the entire time period, or for all constituents.



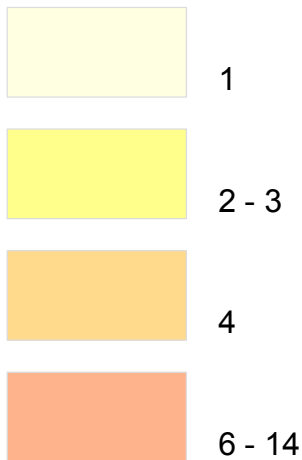


Electrical Conductivity (EC)

In general*,
exceedances of the
water quality criteria
700 umhos/cm
(Beneficial use with most
sensitive limit for EC:
Agricultural Supply)

* A more stringent objective applies to
a few specific water bodies

Management Plan
Sub-basins:
No. of MONITORING
SITES with 2 or more
exceedances of
Electrical Conductivity

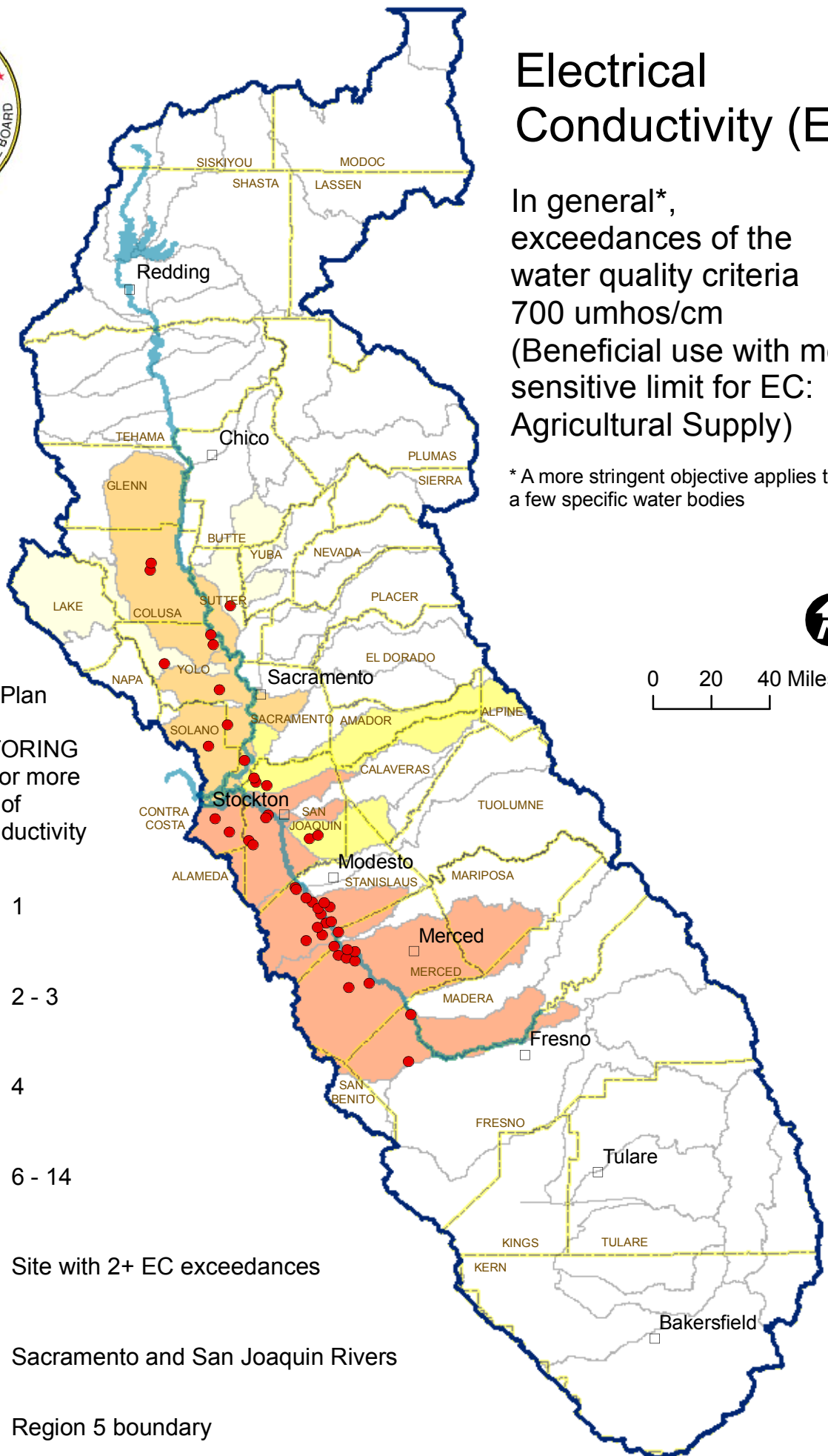


● Site with 2+ EC exceedances

— Sacramento and San Joaquin Rivers

Region 5 boundary

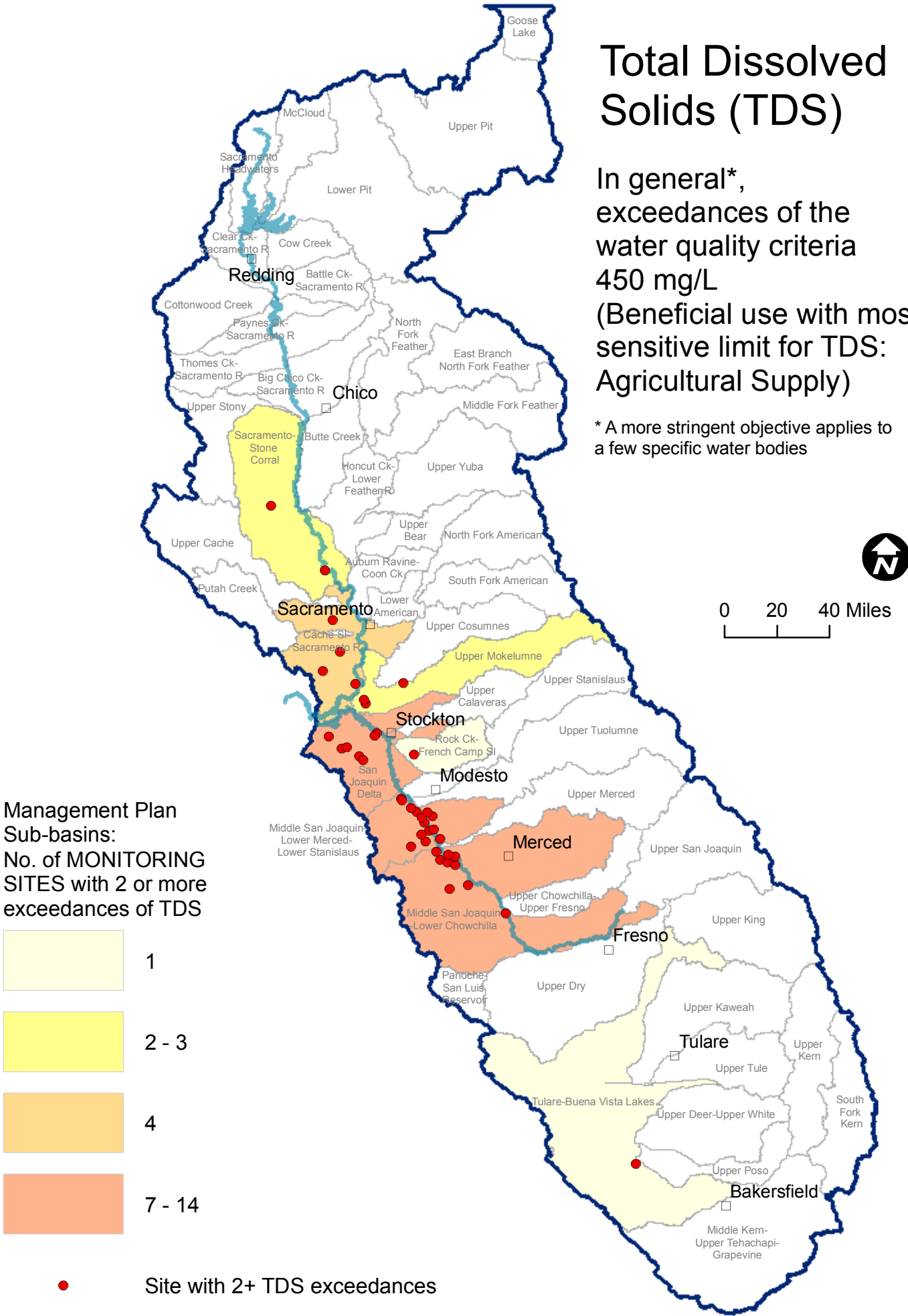
0 20 40 Miles



Total Dissolved Solids (TDS)

In general*,
exceedances of the
water quality criteria
450 mg/L
(Beneficial use with most
sensitive limit for TDS:
Agricultural Supply)

* A more stringent objective applies to
a few specific water bodies



NITRATE in surface waters

Exceedances of the CA Primary
Maximum Contaminant Limit
(MCL) of 45 mg/L as nitrate
and 10 mg/L as nitrogen
(Municipal and Domestic Supply)



- Nitrate management plan site
- Sacramento and San Joaquin Rivers
- ▭ Region 5 boundary
- ▭ Surface water sub-basin boundary



0 5 10 Miles

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